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Observations of Comet III. 1854, at Mr. Bishop's Observatory, Regent's Park.

June 28, at 11h 36m 49s G.M.T.; R.A. 110° 42′ 26″; Decl. + 59° 42′ 58″.

The following calculated places of the comet have been furnished by Mr. Hind:—

0h Gr. M.T.	α	δ	Δ	r
	° ′	° ′		
July 16	150 52	+39 0	1·406	0·818
26	157 36	29 31	1·668	0·951
Aug. 5	161 39	22 22	1·922	1·097
15	164 17	+16 8	2·330	1·247

An Account of the Observatory at Hartwell House.

By John Lee, Esq., LL.D., F.R.S., &c.

"In presenting an account of my observatory to the Astronomical Society, it is not my intention to enter into any lengthened detail, as both the building itself and the principal instruments which it contains are minutely described by my excellent friend Admiral Smyth in the *Ædes Hartwellianæ* and in the *Celestial Cycle*. The former work, which was printed for private circulation only, contains an account of my first small observatory with its fixed and portable instruments. Here the tangible advantages of practical astronomy followed the physical theory, which formed a prominent part of my college reading; and the pleasures I have thus experienced, of all others perhaps the purest we are permitted to enjoy, have induced me to associate with myself as astronomical fellow-labourers my friends and neighbours at Aylesbury, Hartwell, and Stone. The three observatories which have recently been erected in these localities have already been described at the meetings of this Society; and to complete the cycle, I wish to offer the following short description of my own.

"My second and larger observatory adjoining the south-east angle of Hartwell House, consists of an ante-room, transit-room, and equatoreal tower, in the erection of which no expense was spared in order to insure the approbation of the most critical astronomer. Admiral Smyth, the Chairman of our synod, availed himself of the advice and labours of the elder Tully, Mr. Dollond, Mr. Vulliamy, Mr. C. May, and Mr. Thomas Jones, and, therefore, in the construction of both the building and the instruments he was determined to be satisfied with nothing short of the utmost attainable perfection. That the work of the practical optician and engineer was sufficiently successful, is evident from the meed of praise which it has received in the *Ædes Hartwellianæ*, as well as from the fact especially recorded by the Admiral himself, that he was generally enabled to give to his Hartwell measures of double stars *high weights*.

"The model now exhibited of the observatory, by our village carpenter, Mr. G. Carter, is on the scale of an inch to the foot, and points out in detail the position and size of the instruments. The ante-room is 11 feet by 8½ feet. The transit-room is 16 feet 5 inches by 11 feet 2 inches, and 10 feet 5 inches in height; the tower 15¼ feet in diameter, and 16 feet in height. The north pier in the tower is a single block of Portland stone, and is 12 feet 3 inches high and 3 feet square at the base. The polar axis, which is 10 inches square in the centre and 8 inches at the two extremities, is 13 feet long. The piers are built upon a bed of concrete, which is placed upon the limestone rock at a depth of seven feet below the surface. The walls are 14 inches thick and covered with a thick coat of cement.

"The transit instrument 5 feet focal length, with an object-glass 3¼ inches in diameter, was supplied by Mr. T. Jones, of Charing Cross, at a cost of 105*l*. It is supported by two piers of Bath stone, and borne at the centre by two well-proportioned cones, which terminate in rigorously turned pivots of bell-metal of 1¼ inch in diameter. These pivots, which are 30 inches apart, rest upon Y's, also of bell-metal, but the latter are additionally hardened by the introduction of a thin slice of Brazil pebble. The adjustment of the transit instrument is tested by two meridian marks, which are placed respectively 100 feet north and south of the observatory slit, and are inserted into blocks of marble—that on the north side representing the Temple of Janus as given on a large brass medal of Nero, and that on the south side being a miniature of the façade of the Temple of Concord at Girgenti.

"The excellent clock by Vulliamy, with Graham's dead-beat escapement, cost also 105*l*.

"An object-glass for the equatoreal was purchased from Sir James South for 200*l*., but on the dismantling of the Bedford Observatory, Tulley's *chef-d'œuvre*, 5·9 inches in diameter and 10 feet focal length, which had been purchased by Admiral Smyth from Sir James South for 220*l*., was transferred to Hartwell with its equatoreal mounting by Dollond, and its equatoreal clock invented by the Rev. R. Sheepshanks, and re-made in its essential parts by Mr. C. May. This fine instrument has been duly described by Admiral Smyth in his *Cycle of Celestial Objects*, and in the *Memoirs* of the Society.

"It would be difficult from lapse of time to calculate the expenses of the whole Observatory, and, perhaps, I should feel unwilling to look at its amount. But I may say for the encouragement of younger amateurs, that many a sportsman expends more on his 'Joe Manton' and his dogs, in order to observe the altitude and azimuth of a brace of birds, than a practical astronomer *need lay out* in a most efficient battery for securing the position and distance of double stars.

"The niches in the Observatory are ornamented with busts of Newton, Laplace, and Mrs. Somerville, and portraits of eminent astronomers adorn its walls.

"I may add that meteorological observations are made daily with a complete set of instruments, which were approved by James

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Glaisher, Esq., the indefatigable Secretary of the British Meteorological Society, and the monthly returns are sent to the Registrar General."

Dr. Lee appended to the foregoing account *A Genealogical Table of the Descendants of the Bedford Observatory.* It appears from this Table that the Bedford Observatory was erected in the year 1827; and that it has been followed in direct succession by the construction of ten or eleven other observatories throughout the country.

Mean Places, as determined by Meridian Observations at the Cambridge Observatory, of the Stars of Comparison used by Mr. Maclear at the Cape of Good Hope in Observations of Comet II. 1853. (*Schweizer's Comet.*)

See Monthly Notices, Vol. xiv., No. I., p. 8.

Ref. No.	Name of Star.	Mean R.A. of Star Jan. 1, 1854. h m s	No. of Transit Obs.	Mean N.P.D. of ✻ Jan. 1, 1854. ° ′ ″	No. of Circle Obs.
1		4 59 52·32	2	103 19 20·63	3
2	H.C. 11551	5 57 33·44	2	104 4 57·36	5
3		5 57 55·39	3	104 1 38·67	3
4		5 58 14·21	2	104 6 49·58	3
5		6 11 56·91	3	104 18 19·60	3
6		6 12 48·78	2	104 16 43·45	3
7		6 14 35·97	3	104 14 27·82	4
8	H.C. 12825	6 32 36·39	3	104 1 5·18	4
9	B.A.C. 2221	6 40 11·56	3	104 16 22·08	3
10		6 42 11·88	3	104 13 44·49	3
11		6 47 39·40	3	104 3 48·17	3
12	H.C. 13392	6 48 6·38	3	103 58 24·34	2
13	μ Canis Majoris	6 49 25·22	3	103 51 28·46	3
14		6 56 23·24	2	103 57 31·47	3
15		6 58 19·26	3	103 45 4·95	3
16	H.C. 13848	7 0 41·58	3	103 49 38·05	3
17		7 1 53·54	3	103 45 37·84	3
18		7 8 41·26	3	103 32 54·11	4
19		7 10 3·02	2	103 25 28·99	3
20	H.C. 14228	7 11 14·87	3	103 37 47·73	2
21		7 11 19·93	2		
22		7 14 26·97	2	103 21 28·21	3
23		7 14 51·30	2	103 11 37·77	3
24		7 16 38·61	3	103 4 18·22	3
25		7 19 49·56	3	102 53 59·92	3
26		7 21 39·14	3	102 39 39·14	3
27		7 22 32·77	3	102 50 27·85	3
28		7 23 54·12	2	102 27 48·78	3

Cambridge Observatory,
June 14, 1854.

J. CHALLIS.